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भाग 1-310 यांत्रिक परीक्षण विधियाँ — तांबा-चढ़ी धातुओं की मरोड़ विशेषताओं के लिए परीक्षण

Indian Standard

COAXIAL COMMUNICATION CABLES

PART 1-310 MECHANICAL TEST METHODS — TEST FOR TORSION CHARACTERISTICS OF COPPER-CLAD METALS

ICS 33.120.10

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Wires, Cables, Waveguides and Accessories Sectional Committee, LITD 06

NATIONAL FOREWORD

This Indian Standard (Part 1-310) which is identical with IEC 61196-1-310 : 2005 'Coaxial communication cables — Part 1-310: Environmental test methods — Test for torsion characteristics of copper-clad metals' issued by the International Electrotechnical Commission (IEC) was adopted by the Bureau of Indian Standards on the recommendation of the Wires, Cables, Waveguides and Accessories Sectional Committee and approval of the Electronics and Information Technology Division Council.

The text of IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.

b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use a point (.) as the decimal marker.

In this adopted standard, reference appear to the following International Standard for which Indian Standard also exists. The corresponding Indian Standard which is to be substituted in its place is listed below along with its degree of equivalence for the edition indicated:

International Standard	*Corresponding Indian Standard*	*Degree of Equivalence*
IEC 61196-1 : 2005 Coaxial communication cables — Part 1: Generic specification — General, definitions and requirements	IS/IEC 61196-1 : 2005 Coaxial communication cables: Part 1 Generic specification — General, definitions and requirements	Identical

Only the English language text has been retained while adopting it in this Indian Standard and as such the page numbers given here are not the same as in the IEC Publication.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (*revised*)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Indian Standard

COAXIAL COMMUNICATION CABLES

PART 1-310 MECHANICAL TEST METHODS — TEST FOR TORSION CHARACTERISTICS OF COPPER-CLAD METALS

1 Scope

This part of IEC 61196-1 applies to coaxial communications cables. It specifies test methods for torsion characteristics of copper-clad metals of coaxial cables.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61196-1: 2005, *Coaxial communication cables – Part 1: Generic specification – General, definitions and requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 61196-1 apply.

4 Torsion test

4.1 Principle

The test examines the surface of the conductor, the integrity of the core, and the bond between the copper and its core metal.

4.2 Test equipment

Two clamps are separated on a track or rail. One clamp is non-rotating while the other is driven in a rotating manner, so as to impart a twist into the wire sample. The non-rotating clamp is also able to be adjusted along the track, in order to obtain the gauge length of the specimen at 100 times the diameter of the specimen. A light tension is also available to apply to the non-rotating clamp so as to keep tension on the wire as it is twisted. The rate of twisting is approximately 15 turns per minute.

4.3 Preparation of test specimen

The specimen shall have a straight length between the two clamps that is equal to a gauge length of 100 times the diameter of the specimen.

4.4 Procedure

Perform 20 twists in the gauge length. Examine surface and core integrity.

Continue twisting the wire to destruction and then examine the ends for copper separation from the core metal.

4.5 Expression of results

Indicate whether the surface reveals any seams, pits or slivers and their magnitude after 20 twists in a gauge length of 100 times the wire diameter.

Indicate whether there has been any separation between the copper and the metal core wire after destruction of the core or not.

4.6 Requirement

After 20 twists, the examination of the surface shall not reveal any seams, pits or slivers of sufficient magnitude inherent defects.

After continued twisting the wire to destruction, the examination of the ends shall not reveal any separation between the copper and the metal core wire.

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Amendments Issued Since Publication

Amendment No.	Date of Issue	Text Affected

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